



MECKLENBURG COUNTY
Land Use and Environmental Services Agency
Code Enforcement

Effective January 1, 2019, additional Special Inspection requirements have been added to the code.
See Section 1705.17 of the 2018 NCSBC.
New Section Changes affect: Fire – Resistant Penetrations and Joints

Special Inspections Requirements for Fire – Resistant Penetrations and Joints

Effective January 1, 2019, the 2018 North Carolina State Building Code requires certification of Fire-Resistant Penetrations and Joints; affecting all applicable projects submitted under the 2018 NCSBC, regardless of submittal date.

Primary buildings affected are **High-Rise** construction projects and/or those projects listed in table 1604.5 as a **Category III or IV**.

- High-rise buildings are defined as buildings having an occupied floor located more than 75 feet above the lowest level for Fire Department vehicle access.
- Buildings having a Risk Category III or IV in table 1604.5 of the 2018 North Carolina State Building Code, are categorized based on the nature of occupancy and/or the number of occupants. Risk categories serve as thresholds for a variety of code provisions related, but not limited to, hurricanes, earthquakes, floods, snow, and wind loads. The intent is to enhance the performance of these structures, so lives are protected and so the buildings remain operational during such an event. Below is the list of these type uses from Table 1605.4.

III	<p>Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to:</p> <ul style="list-style-type: none">• Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.• Buildings and other structures containing Group E occupancies with an occupant load greater than 250.• Buildings and other structures containing educational occupancies for students above the 12th grade with an occupant load greater than 500.• Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities.• Group I-3 occupancies.• Any other occupancy with an occupant load greater than 5,000.^a• Power-generating stations, water treatment facilities for potable water, wastewater treatment facilities and other public utility facilities not included in Risk Category IV.• Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that: Exceed maximum allowable quantities per control area as given in Table 307.1(1) or 307.1(2) or per outdoor control area in accordance with the <i>International Fire Code</i>; and Are sufficient to pose a threat to the public if released.^b
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IV	<p>Buildings and other structures designated as essential facilities, including but not limited to:</p> <ul style="list-style-type: none">• Group I-2 occupancies having surgery or emergency treatment facilities.• Fire, rescue, ambulance and police stations and emergency vehicle garages.• Designated earthquake, hurricane or other emergency shelters.• Designated emergency preparedness, communications and operations centers and other facilities required for emergency response.• Power-generating stations and other public utility facilities required as emergency backup facilities for Risk Category IV structures.• Buildings and other structures containing quantities of highly toxic materials that: Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control area in accordance with the <i>International Fire Code</i>; and Are sufficient to pose a threat to the public if released.^b• Aviation control towers, air traffic control centers and emergency aircraft hangars.• Buildings and other structures having critical national defense functions.• Water storage facilities and pump structures required to maintain water pressure for fire suppression.
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These type Special Inspections deal with through penetrations and membrane penetrations of fire stop systems, as well as fire-resistant joint systems and perimeter fire barrier systems. Those being most critical in maintaining fire resistive integrity or fire-resistance rated construction include: **fire walls, fire barriers, fire partitions, smoke barriers, and horizontal assemblies.**

The standards and processes that must be followed are listed in ASTM 2174 for penetrations and ASTM 2393 for joints.

The current process during this transition requires the Registered Design Professional in Responsible Charge (RDPIRC) to check all items on the construction document and identify conformance during the pre-construction meeting with the contractor and the Code Enforcement Official to meet submittal requirements for final sign off to obtain a Certificate of Occupancy for the project.

If you have any questions or would like more information about requirements, please call your Code Enforcement Project Manager for additional details.